

Pioneer Archers Inc.

Warm up and stretching exercises

When commencing a bout of exercise your body needs to make a number of adjustments. These include:

- increasing your breathing and heart rate;
- increasing the energy-releasing reactions in the muscles; and
- promoting blood flow to the muscles to supply them with more oxygen and to remove waste products.

These adjustments do not occur straight away, but require a number of minutes to reach the necessary levels. So the purpose of a warm-up is to encourage these adjustments to occur gradually, by commencing your exercise session at an easy level and increasing the intensity gradually. Pre-exercise warm-up:

- increases blood flow to the muscles, which enhances the delivery of oxygen and nutrients;
- warms your muscles, which promotes the energy-releasing reactions used during exercise and makes the muscles more supple;
- prepares your muscles for stretching;
- prepares you mentally for the upcoming exercise;
- primes your nerve-to-muscle pathways to be ready for exercise; and

The warm-up is widely viewed as a simple measure to prepare your body for exercise of a moderate to high intensity, and is believed to help prevent injury during exercise. Although there is a lack of clear scientific evidence that warming up prevents injuries, anecdotal evidence and logic would suggest that a warm-up should reduce the risk and, at worst, not increase it. One of the best ways to warm up is to perform the upcoming exercise at a slow pace. This will allow you to simulate at low intensity the movements you are about to perform at higher intensity during your chosen activity.

As archery is predominantly an upper body exercise, you should pump your arms or make large but controlled circular movements with your arms to help warm

the muscles of your upper body.

Any stretching is best performed after your muscles are warm, so only stretch after your general warm-up. Stretching muscles when they are cold may lead to a tear. Stretching during a warm-up can include some slow, controlled circling movements at key joints, such as shoulder rolls, but the stretches should not be forced or done at a speed that may stretch the joint, muscles and tendons beyond their normal length.

Another component of stretching during a warm-up is 'static stretching' — where a muscle is gently stretched and held in the stretched position for 10-30 seconds. This is generally considered the safest method of stretching.



Exercise 1 of 4
NECK FLEXION



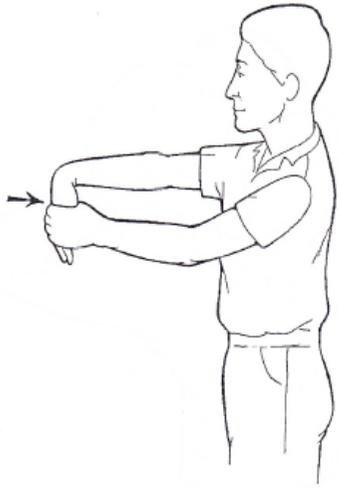
Exercise 2 of 4
NECK EXTENSION/SHOULDER STRETCH



Exercise 3 of 4
NECK SIDE BENDING



Exercise 4 of 4
NECK ROTATION



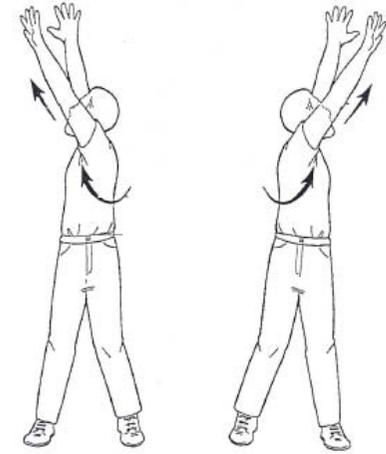
Exercise 1 of 8
WRIST FLEXION



Exercise 2 of 8
WRIST EXTENSION BILATERAL



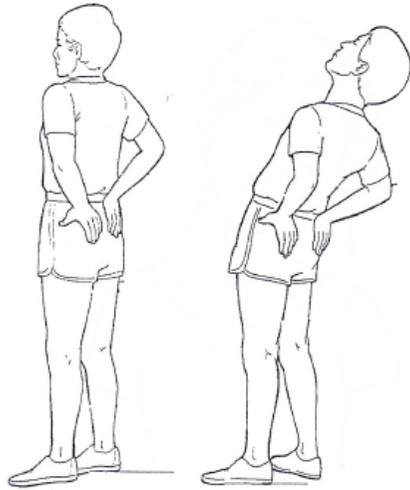
Exercise 5 of 8
BACK SIDEBENDING



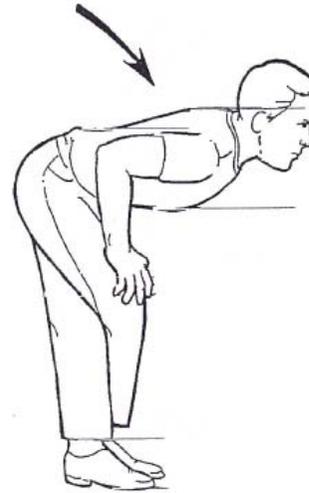
Exercise 6 of 8
BACK ROTATION



Exercise 3 of 8
BACK EXTENSION



Exercise 4 of 8
BACK EXTENSION



Exercise 7 of 8
HIP FLEXION (HAMSTRING)



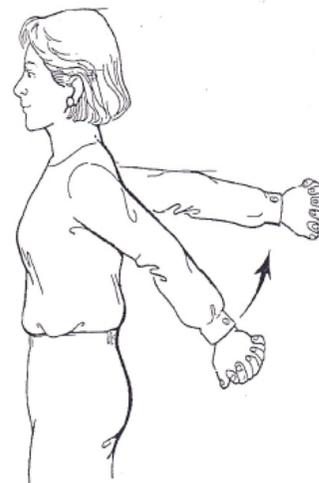
Exercise 8 of 8
HIP EXTENSION/KNEE FLEXION



Exercise 1 of 8
UPPER BACK SIDE BENDING



Exercise 2 of 8
SHOULDER FLEXION



Exercise 5 of 8
SHOULDER HYPEREXTENSION



Exercise 6 of 8
SHOULDER EXTERNAL ROTATION



Exercise 3 of 8
SHOULDER ABDUCTION/FLEXION



Exercise 4 of 8
SHOULDER HORIZONTAL ADDUCTION



Exercise 7 of 8
SHOULDER INTERNAL ROTATION



Exercise 8 of 8
SHOULDER INTERNAL/EXTERNAL ROTATION